

REMARKS

The present invention addresses and resolves a problem in holding and binding optical fibers that form a single optical fiber bundle so that they can be fixed relative to each other to facilitate coupling a pair of fiber optical bundles together.

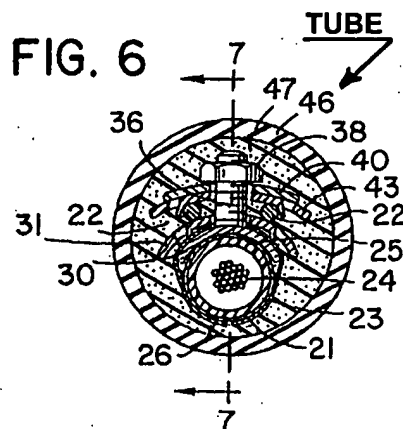
As can be appreciated, this is a field of technology in which numerous skilled engineers and scientists have spent a considerable period of time in seeking improvements over the last fifteen years. Needless to say, there is still a requirement to provide an economical solution to these issues by facilitating relatively low labor costs and providing a desired optical coupling.

The present invention utilizes a connector body with an axially extending bore that can receive a tubular member within the bore. The tubular member has a configuration of a second bore extending therethrough with an intermediate opening that bifurcates a front portion of the tubular member from a rear portion of the tubular member. Optical fibers that form a bundle can be inserted within the second bore of the tubular member, and a holding means can maintain the relative position of the optical fiber bundle at its end portion to be appropriately prepared, for example, by application of heat for fusing its structure. The holding member can be inserted within the opening and can include an encircling resilient band that is dimensioned to exert a pressing force when applied about the tubular member. Alternatively, savings, in the amount of adhesive that must be inserted within the capillary spaces that are formed in the optical fiber bundles can be achieved. The connector body can receive an optical fiber bundle mounted, for example, within a sheath that can be appropriately held by a fastener.

Thus, the present invention provides an improvement in an optical fiber holder with a pressing structure that minimizes any capillary action that can occur in the clearances between the optical fibers while, at the same time, not impairing the flexibility of the optical fiber holder

that could occur with an extensive use of adhesive. These features are set forth in the original claims and the newly drafted Claims 9-14.

The Office Action contended that Claims 1-7 and 9-11 were completely anticipated by the *Huynh et al.* (U.S. Patent No. 5,491,766). The Office Action contended specifically that the *Huynh et al.* reference taught a tubular member 46 as shown, for example, in Figures 6 and 7, and in a cutaway version in Figure 1.



The *Huynh et al.* reference actually discloses an exterior plastic tubular member 46 and an interior buffer tube 25 that surrounds and prevents the optical fibers from separating from each other. There is no discussion nor disclosure of any pressing structure to press the buffer tube 25 against an inner periphery of the tubular member 46.

Actually, the *Huynh et al.* reference is disclosing a structure in the form of a clamp that could secure a fiber optical cable relative to a support surface and further facilitate an electrical grounding of a metallic shield while accommodating elongated strength members and reducing the likelihood of water migration from the cable. As seen in an exploded view of Figure 2 of the

Huynh et al. reference, a metallic shield surrounds a metal core 20, and a clamping action is performed between a base member 30, which includes projections 29 for scraping through any coating on the metallic shield 21 to establish a good electrical contact (see Column 6, Lines 41-47). Support members 22 extend on the exterior surface and are appropriately clamped, as shown in Figure 3. A threaded stud 36 extends through openings in both the shield and the strength members and can receive a nut 38. As can be readily appreciated, the actual fiber bundle 24 is contained within the metal core 20, and this clamping structure is actually used to hold the braided strap 40 and secure a cantilevering arrangement of the pair of extending rods or strength members 22 that are positioned between the metallic shield 21 and the jacket 23. Figure 3 discloses that the optical fiber bundle has been neither secured nor addressed by any equivalent tubular member.

Reference can be made specifically to Figure 7 and the description in Column 7, Line 66, through Column 8, Line 9. In this regard, there is a desire to prevent moisture migration from an end of the fiber optic cable and, accordingly, a sealing member includes a tube 46 that can be placed around the fiber optical cable, while a water blocking compound 47 to encapsulate the structure.

Referring to Figure 7, it is readily seen that the fiber optic is simply maintained within a buffer tube 25. The tubular member 46 does not have a bore for receiving the optical fiber bundle in such a manner that a holding means can provide a direct holding force to press the fiber optical bundle against an interior of the tubular member as described in our present invention. Additionally, there is no application of an adhesive, but rather only a water blocking compound on the exterior structure of the sheath or housing of the fiber optic bundle.

The Office Action erroneously describes the base member 30 of the unit *Huynh et al.* device as comprising a threaded stud 36 as shown in Figure 2. However, the threaded stud 36 is for connecting a bonding strap 40, not for pressing the buffer tube 25 against the inner periphery of the tubular member 46. There apparently is a misconception in the interpretation of the present claims.

Finally, Claim 8 was rejected as being obvious over the *Huynh et al.* reference when taken further in view of the *Dey et al.* (U.S. Patent No. 4,372,792). As mentioned above, the *Huynh et al.* reference does not teach the claimed elements of the present invention. The *Dey et al.* reference teaches a greasy water-impermeable medium 4 that can be inserted during the production of a flexible stranded optical fiber body. The *Dey et al.* reference simply discloses the insertion of the greasy water-impermeable medium, not only inside of a rigid production insertion tube 11 that receives at least a pair of optical fibers from their respective spools 12, but also the provision of the same material on the exterior of the rigid tube and within an aluminum outer sheath that will be folded together to form the final structure. As can be seen at the left-hand side of Figure 2, the resulting product is simply a greasy mass in which the actual pair of fiber optical members is roughly situated within the middle of the aluminum tube. There is certainly no description of the greasy material as an adhesive nor any suggestion that it holds the glass fiber members relative to any other structure.

Measuring a claimed invention against the standard established by section 103 requires the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. See, e.g., *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed.Cir. 1983). Close adherence to this methodology is especially important in the case of less technologically complex inventions, where the very ease with

which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." *Id.*

In re Anita Dembiczak, 50 U.S.P.Q. 2d (Fed. Cir. 1999)
1614, 1617.

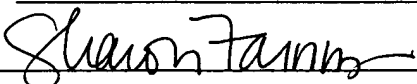
In summary, it is respectfully submitted that the *Dey et al.* reference does not cure the deficiencies as mentioned above with regards to the *Huynh et al.* disclosure and, as such, it was apparently cited in hindsight from the teachings of the present specification. It is recognized that it is difficult to examine a patent application without first reviewing the specification and claims. When, however, the principal reference does not teach the elements of the invention, the secondary reference must then be extremely comprehensive to be a valid § 103 reference. The *Dey et al.* reference does not meet those requirements, and it is believed that the claims in the pending application should now be allowable.

The newly drafted Claims 12 through 17 provide an alternative definition of the invention that also distinguishes from the *Huynh et al.* and *Dey et al.* references as mentioned above.

If the Examiner believes that a telephone interview will help further the prosecution of this case, he is respectfully requested to contact the undersigned attorney at the listed telephone number.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on December 8, 2004.

By: Sharon Farnus

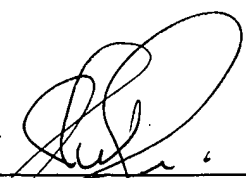


Signature

Dated: December 8, 2004

Very truly yours,

SNELL & WILMER L.L.P.



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